

DATA EVALUATION RECORD

Hexazinone/Velpar

Study Type: Acute Six Pack (81-2, -3, -5, and -6)

Work Assignment No. 1-33D (D220610)

Prepared for

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U.S. Environmental Protection Agency
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Disclaimer

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[Hexazinone]

Acute Dermal Study (81-2)

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05/08/96, Date L. Fried

DATA EVALUATION RECORD

STUDY TYPE: Acute Dermal Toxicity - Rabbit
OPPTS 870.1200 [§81-2]

DP BARCODE: D220610

P.C. CODE: 107201

EPA REG. NO.: 352-378

SUBMISSION CODE:

TOX. CHEM. NO.:

TEST MATERIAL (PURITY): Velpar (soluble powder formulation containing 89.9% hexazinone)

SYNONYMS: H-20749; DPX-A3674-262; 3-cyclohexyl-6-(dimethylamino)-1-methyl-1,3,5-triazine-2,4(1H,3H)-dione (hexazinone)

CITATION: Filliben, T. (1994) Acute dermal toxicity study with DPX-A3674-262 (Velpar) in rabbits. E.I. du Pont de Nemours and Company, Newark, DE. Laboratory Report Number 577-94. October 27, 1994. MRID 43784706. Unpublished.

SPONSOR: DuPont Agricultural Products, E.I. du Pont de Nemours and Company, Elkton Road, Wilmington, DE

EXECUTIVE SUMMARY: In an acute dermal toxicity study (MRID 43784706), five young adult New Zealand White rabbits/sex were dermally exposed to Velpar (89.9% hexazinone) at 5,000 mg/kg (>2X limit concentration) for 24 hours. The test substance was applied to approximately 10% of the total body surface area. Animals were observed for clinical signs and mortality for up to 14 days postdosing.

Dermal LD₅₀ Males = >5,000 mg/kg (observed)

Females = >5,000 mg/kg (observed)

Velpar is classified as **TOXICITY CATEGORY IV** based on the observed LD₅₀ values in both sexes.

All animals survived and appeared normal throughout the 14-day observation period. Moderate to severe erythema was observed at 10/10 application sites 1 hour following patch removal. Erythema gradually subsided from all but one affected site during the 14-day observation period. In addition, very slight to slight edema was observed at a single application site between 4 and 8 days. No significant treatment-related effect on body weight was observed during the study, and necropsy after 14 days revealed no gross abnormalities.

This study is classified **acceptable**, and satisfies the guideline requirement for an acute dermal study (81-2) in the rabbit.

COMPLIANCE: Signed and dated GLP, Quality Assurance, and Data Confidentiality statements were provided.

I. MATERIALS AND METHODS

A. MATERIALS:

1. Test Material: Velpar
Description: White powder
Lot/Batch #: Y940516016
Purity: 89.9% Hexazinone
CAS #: 51235-04-2
2. Vehicle: Deionized water
3. Test animals: Species: Rabbit
Strain: New Zealand White
Age: Young adult
Weight: 1.9-2.1 kg (combined sexes)
Source: Hare Marland, Hewitt, NJ
Acclimation period: Approximately 2 weeks
Diet: Purina Certified High-Fiber Rabbit Chow (#5325), approximately 125 g/animal/day
Water: Tap water, ad libitum

B. STUDY DESIGN and METHODS:

1. In-life dates: August 25-September 8, 1994
2. Animal assignment and treatment: Fur from the dorsal areas of five animals/sex was clipped 1 day prior to dermal administration of Velpar at 5,000 mg/kg (>2X limit concentration). Each animal was fitted with a plastic collar, and the test substance was uniformly applied to approximately 10% of the body surface area using a pre-moistened (deionized water) 190-cm² gauze pad. The torso of each animal was then wrapped successively with plastic film, stretch gauze bandage, and elastic adhesive bandage. After 24 hours, the coverings and collars were removed, and the application sites were washed with Ivory soap and warm water. The rabbits were observed for signs of toxicity and/or mortality 4 hours following application, and once daily thereafter for the remainder of the 14-day study. Once daily, erythema and edema were scored separately according to the standard Draize scale.

Body weights were recorded at 0, 7, and 14 days. At 14 days, the surviving animals were sacrificed, necropsied, and examined for gross pathological changes.

3. Statistics: Not applicable to this study.

II. RESULTS AND DISCUSSION:

- A. Mortality: All animals survived the 14-day observation period.

Dermal LD₅₀ Males = >5,000 mg/kg (observed)
Females = >5,000 mg/kg (observed)

- B. Clinical observations: All animals appeared normal throughout the 14-day observation period.

Treatment-site irritation characterized by moderate to severe erythema (scores of 3-4) was observed at 10/10 application sites 1 hour following patch removal. Erythema gradually subsided from all but one affected site during the 14-day observation period. Very slight to slight edema (scores of 1-2) was observed at a single application site (male animal) between 4 and 8 days following administration. In addition, epidermal scaling and sloughing were observed at 4/5 application sites of male animals between 4 and 14 days and at 2/5 application sites of female animals between 4 and 6 days.

- C. Body Weight: No significant treatment-related effect on body weight was observed, with overall (0-14 days) average increases of 19% (both sexes).
- D. Necropsy: Necropsy revealed no gross abnormalities.
- E. Deficiencies: Although the body weights of 3/10 test animals were below the 2.0-kg limit specified in Subdivision F guidelines, this deficiency is considered minor since the animals were >1.9 kg.

Individual clinical observations for the entire day of dosing were not conducted. However, this deficiency does not alter the observed LD₅₀ values or subsequent Toxicity Category of Velpar, and is therefore considered minor.